

AMENDMENT TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of claims in the application.

1-11. (Canceled)

12. (Previously presented) A digital motion picture decoding method comprising the steps of:

decoding a coded data as a reproduction picture;

outputting the reproduction picture;

receiving a manually inputted signal which causes only one discontinuity in time sequence of the coded data to be decoded and which causes decoding of coded data read after the discontinuity lapses as a new reproduction picture;

outputting a reproduction picture repeatedly until the new reproduction picture is ready to be output, after receiving the manually inputted signal; and

nullifying decoded data, including decoded data which has not been outputted, corresponding to coded data read prior to the occurrence of the discontinuity, after receiving the manually inputted signal.

13. (Previously presented) The digital motion picture decoding method of claim 12, wherein the coded data includes predictive coded data.

14. (Previously presented) The digital motion picture decoding method of claim 13, wherein the nullifying step further nullifies decoded data other than decoded data corresponding to the reproduction picture.

15. (Previously presented) The digital motion picture decoding method of claim 14, further comprising the steps of:

decoding coded data read after the discontinuity lapses as the new reproduction picture;
and
outputting the new reproduction picture.

16. (Previously presented) The digital motion picture decoding method of claim 15, further comprising the steps of:

stopping the decoding of coded data read prior to the occurrence of the discontinuity; and
nullifying coded data read prior to the occurrence of the discontinuity.

17. (Previously presented) The digital motion picture decoding method of claim 16, wherein the coded data includes bidirectional predictive coded data.

18. (Previously presented) The digital motion picture decoding method of claim 17, wherein the coded data is coded by an MPEG coding method.

19. (Previously presented) The digital motion picture decoding method of claim 120, wherein the manually inputted signal is received from a remote control.

20. (Previously presented) The digital motion picture decoding method of claim 16, wherein the nullified decoded data is not reproduced thereafter.

21. (Previously presented) A digital motion picture outputting method comprising the steps of:

outputting a reproduction picture;

receiving a manually inputted signal which causes only one discontinuity in time sequence of coded data to be decoded and which causes decoding coded data read after the discontinuity lapses as a new reproduction picture;

outputting a reproduction picture repeatedly until the new reproduction picture is ready for output, after receiving the manually inputted signal; and

nullifying decoded data, including decoded data which has not been outputted, corresponding to coded data read prior to the occurrence of the discontinuity, after receiving the manually inputted signal.

22. (Previously presented) The digital motion picture outputting method of claim 21, wherein the coded data includes predictive coded data.

23. (Previously presented) The digital motion picture outputting method of claim 22, wherein the nullifying step further nullifies decoded data other than decoded data corresponding to the reproduction picture before outputting the new reproduction picture.

24. (Previously presented) The digital motion picture outputting method of claim 23, further comprising the step of outputting the new reproduction picture.

25. (Previously presented) The digital motion picture outputting method of claim 24, further comprising the steps of:

stopping the decoding of coded data read prior to the occurrence of the discontinuity; and
nullifying coded data read prior to the occurrence of time discontinuity.

26. (Previously presented) The digital motion picture outputting method of claim 25, wherein the coded data includes bidirectional predictive coded data.

27. (Previously presented) The digital motion picture outputting method of claim 26, wherein the coded data is coded by an MPEG coding method.

28. (Previously presented) The digital motion picture outputting method of claim 121, wherein the manually inputted signal is received from a remote control.

29. (Previously presented) The digital motion picture outputting method of claim 25, wherein the nullifying decoded data is not reproduced thereafter.

30. (Previously presented) A digital motion picture decoding apparatus, comprising:
a decoder configured to decode coded data as a reproduction picture;
an outputting unit configured to output the reproduction picture; and

a controller configured to receive a manually inputted signal which causes only one discontinuity in time sequence of a coded data to be decoded and which causes decoding of coded data read after the discontinuity lapses as a new reproduction picture,

wherein the controller is configured to nullify decoded data, including decoded data which has not been outputted, corresponding to coded data read prior to the occurrence of the discontinuity and is configured to output a reproduction picture repeatedly until the new reproduction picture is ready to be output, after receiving the manually inputted signal.

31. (Previously presented) The digital motion picture decoding apparatus of claim 30, wherein the coded data includes predictive coded data.

32. (Previously presented) The digital motion picture decoding apparatus of claim 31, wherein the controller is further configured to nullify decoded data other than decoded data corresponding to the reproduction picture.

33. (Previously presented) The digital motion picture decoding apparatus of claim 32, wherein the outputting unit outputs the new reproduction picture.

34. (Previously presented) The digital motion picture decoding apparatus of claim 33, wherein the controller is configured to:

stop the decoding coded data read prior to the occurrence of the discontinuity; and
nullify coded data read prior to the occurrence of time discontinuity.

35. (Previously presented) The digital motion picture decoding apparatus of claim 34, wherein the coded data includes bidirectional predictive coded data.

36. (Previously presented) The digital motion picture decoding apparatus of claim 35, wherein the coded data is coded by an MPEG coding method.

37. (Previously presented) The digital motion picture decoding apparatus of claim 122, wherein the manually inputted signal is received from a remote control.

38. (Previously presented) The digital motion picture decoding apparatus of claim 34, wherein the nullifying decoded data is not reproduced thereafter.

39. (Previously presented) A digital motion picture outputting apparatus, comprising:
an outputting unit configured to output the reproduction picture; and
a controller configured to receive a manually inputted signal which causes only one discontinuity in time sequence of coded data to be decoded and which causes decoding of coded data read after the discontinuity lapses as a new reproduction picture,

wherein the controller is configured to nullify decoded data, including decoded data which has not been outputted, corresponding to coded data read prior to the occurrence of the discontinuity and is configured to output a reproduction picture repeatedly until the new reproduction picture is ready to be displayed, after receiving the manually inputted signal.

40. (Previously presented) The digital motion picture outputting apparatus of claim 39, wherein the coded data includes predictive coded data.

41. (Previously presented) The digital motion picture outputting apparatus of claim 40, wherein the controller is further configured to nullify decoded data other than decoded data corresponding to the reproduction picture.

42. (Previously presented) The digital motion picture outputting apparatus of claim 41, wherein the outputting unit outputs the new reproduction picture.

43. (Previously presented) The digital motion picture outputting apparatus of claim 42, wherein the controller is configured to:

stop the decoding coded data read prior to the occurrence of the discontinuity; and
nullify coded data read prior to the occurrence of time discontinuity.

44. (Previously presented) The digital motion picture outputting apparatus of claim 43, wherein the coded data includes bidirectional predictive coded data.

45. (Previously presented) The digital motion picture outputting apparatus of claim 44, wherein the coded data is coded by an MPEG coding method.

46. (Previously presented) The digital motion picture outputting apparatus of claim 123, wherein the manually inputted signal is received from a remote control.

47. (Previously presented) The digital motion picture outputting apparatus of claim 43, wherein the nullified decoded data is not reproduced thereafter.

48. (Previously presented) A digital motion picture decoding method comprising the steps of:

decoding coded data as a reproduction picture;
outputting the reproduction picture;
receiving a manually inputted signal;
nullifying decoded data which has not been outputted, corresponding to coded data which has been read, in response to the manually inputted signal; and
outputting a reproduction picture repeatedly until the new reproduction picture from coded data read after receiving the manually inputted signal is ready to be displayed.

49. (Previously presented) The digital motion picture decoding method of claim 48, wherein the coded data includes predictive coded data.

50. (Previously presented) The digital motion picture decoding method of claim 49, wherein the nullifying step further nullifies decoded data other than decoded data corresponding to the reproduction picture before outputting the new reproduction picture.

51. (Previously presented) The digital motion picture decoding method of claim 50, further comprising the step of:

decoding coded data read after receiving the manually inputted signal as the new reproduction picture; and

outputting the new reproduction picture.

52. (Previously presented) The digital motion picture decoding method of claim 51, further comprising the steps of:

stopping decoding coded data which has been read; and

nullifying coded data which has been read.

53. (Previously presented) The digital motion picture decoding method of claim 52, wherein the coded data includes bidirectional predictive coded data.

54. (Previously presented) The digital motion picture decoding method of claim 53, wherein the coded data is coded by an MPEG coding method.

55. (Previously presented) The digital motion picture decoding method of claim 124, wherein the manually inputted signal is received from a remote control.

56. (Previously presented) The digital motion picture decoding method of claim 52, wherein the nullifying decoded data is not reproduced thereafter.

57. (Previously presented) A digital motion picture outputting method comprising the steps of:

outputting a reproduction picture;
receiving a manually inputted signal;
nullifying decoded data which has not been outputted, corresponding to coded data which has been read, in response to the manually inputted signal; and
outputting a reproduction picture repeatedly until the new reproduction picture from coded data read after receiving the manually inputted signal is ready to be displayed.

58. (Previously presented) The digital motion picture outputting method of claim 57, wherein the coded data includes predictive coded data.

59. (Previously presented) The digital motion picture outputting method of claim 58, wherein the nullifying step further nullifies decoded data other than decoded data corresponding to the reproduction picture before outputting the new reproduction picture.

60. (Previously presented) The digital motion picture outputting method of claim 59, further comprising the step of outputting the new reproduction picture.

61. (Previously presented) The digital motion picture outputting method of claim 60, further comprising the steps of:

stopping the decoding of coded data which has been read; and
nullifying the coded data which has been read.

62. (Previously presented) The digital motion picture outputting method of claim 61, wherein the coded data includes bidirectional predictive coded data.

63. (Previously presented) The digital motion picture outputting method of claim 62, wherein the coded data are coded by an MPEG coding method.

64. (Currently amended) The digital motion picture outputting method of claim [[63]] 125, wherein the manually inputted signal is received from a remote control.

65. (Previously presented) The digital motion picture outputting method of claim 61, wherein the nullifying decoded data is/are not reproduced thereafter.

66. (Previously presented) A digital motion picture decoding apparatus, comprising:
a decoder configured to decode coded data as a reproduction picture;
an outputting unit configured to output the reproduction picture; and
a controller configured to receive a manually inputted signal,
wherein the controller is configured to:

 nullify decoded data which has not been outputted, corresponding to coded data which has been read, in response to the manually inputted signal, and

 output a reproduction picture repeatedly until the new reproduction picture from coded data read after receiving the manually inputted signal is ready for display.

67. (Previously presented) The digital motion picture decoding apparatus of claim 66, wherein the coded data includes predictive coded data.

68. (Previously presented) The digital motion picture decoding apparatus of claim 67, wherein the controller is further configured to nullify decoded data other than decoded data corresponding to the reproduction picture before outputting the new reproduction picture.

69. (Previously presented) The digital motion picture decoding apparatus of claim 68, wherein,

the decoder decodes coded data read after receiving the manually inputted signal as the new reproduction picture; and

the outputting unit outputs the new reproduction picture.

70. (Previously presented) The digital motion picture decoding apparatus of claim 69, wherein the controller is configured to:

stop decoding the coded data; and

nullify coded data which has been read.

71. (Previously presented) The digital motion picture decoding apparatus of claim 70, wherein the coded data includes bidirectional predictive coded data.

72. (Previously presented) The digital motion picture decoding apparatus of claim 71, wherein the coded data is coded by an MPEG coding method.

73. (Currently amended) The digital motion picture decoding apparatus of claim [[72]] 126, wherein the manually inputted signal is received from a remote control.

74. (Previously presented) The digital motion picture decoding apparatus of claim 70, wherein the nullifying decoded data is/are not reproduced thereafter.

75. (Previously presented) A digital motion picture outputting apparatus, comprising:
an outputting unit configured to output the reproduction picture; and
a controller configured to receive a manually inputted signal,
wherein the controller is configured to:

 nullify decoded data which has not been outputted, corresponding to coded data which has been read, in response to the manually inputted signal; and

 output a reproduction picture repeatedly until the new reproduction picture from coded data read after receiving the manually inputted signal is ready to be output.

76. (Previously presented) The digital motion picture outputting apparatus of claim 75, wherein the coded data includes predictive coded data.

77. (Previously presented) The digital motion picture outputting apparatus of claim 76, wherein the controller is further configured to nullify decoded data other than decoded data corresponding to the reproduction picture before outputting the new reproduction picture.

78. (Previously presented) The digital motion picture outputting apparatus of claim 77, wherein the outputting unit outputs the new reproduction picture.

79. (Previously presented) The digital motion picture outputting apparatus of claim 78, wherein the controller is configured to:

stop the decoding the coded data; and

nullify coded data read prior to receiving the manually inputted signal.

80. (Previously presented) The digital motion picture outputting apparatus of claim 79, wherein the coded data includes bidirectional predictive coded data.

81. (Previously presented) The digital motion picture outputting apparatus of claim 80, wherein the coded data is coded by an MPEG coding method.

82. (Currently amended) The digital motion picture outputting apparatus of claim [[81]] 127, wherein the manually inputted signal is received from a remote control.

83. (Previously presented) The digital motion picture outputting apparatus of claim 79, wherein the nullifying decoded data is/are not reproduced thereafter.

84. (Previously presented) A digital motion picture decoding method comprising the steps of:

(a) decoding a coded data stream as a reproduction picture;

(b) receiving a manually inputted signal which causes only one discontinuity in time sequence of a coded data stream to be decoded;

(c) maintaining a displayed frame until a frame from coded data read after the discontinuity lapses is decoded and ready to be displayed; and

(d) nullifying decoded data, including decoded data which has not been displayed and has been decoded before decoding of a frame that has been outputted to be displayed, corresponding to coded data read prior to the occurrence of the discontinuity.

85. (Previously presented) The digital motion picture decoding method according to claim 84, wherein the frame that has been outputted to be displayed corresponds to a displayed frame.

86. (Previously presented) The digital motion picture decoding method according to claim 84, wherein the frame that has been outputted to be displayed corresponds to a frame designated to display next to a displayed frame.

87. (Previously presented) The method for decoding the motion picture according to claim 84, wherein the coded data stream comprises a plurality of contiguous coded frames.

88. (Previously presented) The method for decoding the digital motion picture according to claim 84, further comprising the steps of:

- (i) identifying from the coded data stream a frame of a first type;
- (ii) outputting the frame of the first type first from the coded data stream;

- (iii) identifying from the coded data stream a frame of a second type that is before a last frame in the coded data stream; and
- (iv) outputting the frame of the second type last from the coded data stream.

89. (Previously presented) The method for decoding the digital motion picture according to claim 88, wherein the frame of the first type corresponds to an intra-frame coded picture.

90. (Previously presented) The method for decoding the digital motion picture according to claim 88, wherein the frame of the second type corresponds to a forward predictive coded picture.

91. (Previously presented) The method for decoding the digital motion picture according to claim 88, further comprising the steps of:

- (v) identifying from the coded data stream a frame of a third type after the frame of the second type; and
- (vi) outputting the frame of the third type after the frame of the first type and before the frame of the second type.

92. (Previously presented) The method for decoding the digital motion picture according to claim 91, wherein the frame of the third type corresponds to a bidirectional predictive coded picture.

93. (Previously presented) The method for decoding the digital motion picture according to claim 84, further comprising the steps of:

- (i) storing a plurality of frames decoded from the coded data stream; and
- (ii) selecting a stored frame to be output.

94. (Previously presented) The method for decoding the digital motion picture according to claim 93, wherein step (c) further comprises the step of reselecting the stored frame to be outputted until the frame from coded data read after the discontinuity lapses is decoded and ready to be displayed.

95. (Previously presented) The method for decoding the digital motion picture according to claim 94, wherein the frame to be reselected corresponds to the frame outputted upon receiving the interrupt signal.

96. (Previously presented) The method for decoding the digital motion picture according to claim 84, wherein the coded data coded by an MPEG coding scheme.

97. (Currently amended) The method for decoding the digital motion picture according to claim [[84]] 128, wherein the manually inputted signal is received from an external device.

98. (Previously presented) A method of reproducing a digital motion picture comprising a first series of coded frames arranged in a first order and a second series of coded frames, comprising the steps of:

- (a) decoding the first series of coded frames in the first order;
- (b) outputting frames decoded in step (a) in a second order different from the first order;
- (c) receiving an interrupt signal when at least one frame has been outputted in step (b);
- (d) decoding the second series of coded frames further to the interrupt signal;
- (e) nullifying at least one frame that has been decoded in step (a) but has not been outputted according to the second order; and
- (f) maintaining a frame that has been outputted according to the second order at least until a frame of the second series has been decoded and is ready to be outputted.

99. (Previously presented) The method for decoding the motion picture according to claim 98, wherein the first series and the second series each comprise a plurality of contiguous frames.

100. (Previously presented) The method for decoding the motion picture according to claim 98, wherein in step (b) the frames are outputted to be displayed.

101. (Previously presented) The method for decoding the digital motion picture according to claim 98, wherein execution of steps (a) and (b) at least partially overlap.

102. (Previously presented) The method for decoding the digital motion picture according to claim 98, wherein step (f) further comprises the step of repeatedly outputting the frame that has been outputted according to the second order at least until the frame of the second series has been decoded and is ready to be outputted.

103. (Previously presented) The method for decoding the digital motion picture according to claim 98, further comprising the steps of:

- (i) identifying from the first series a frame of a first type;
- (ii) outputting the frame of the first type first from the series;
- (iii) identifying from the first series a frame of a second type that is before a last frame in the first series; and
- (iv) outputting the frame of the second type last from the first series.

104. (Previously presented) The method for decoding the digital motion picture according to claim 103, wherein the frame of the first type corresponds to an intra-frame coded picture.

105. (Previously presented) The method for decoding the digital motion picture according to claim 103, wherein the frame of the second type corresponds to a forward predictive coded picture.

106. (Previously presented) The method for decoding the digital motion picture according to claim 103, further comprising the steps of:

(v) identifying from the first series a frame of a third type after the frame of the second type; and

(vi) outputting the frame of the third type after the frame of the first type and before the frame of the second type.

107. (Previously presented) The method for decoding the digital motion picture according to claim 106, wherein the frame of the third type corresponds to a bidirectional predictive coded picture.

108. (Previously presented) The method for decoding the digital motion picture according to claim 98, further comprising the steps of:

(v) storing the frames decoded in step (a); and

(vi) selecting a stored frame to be output according to the second order.

109. (Previously presented) The method for decoding the digital motion picture according to claim 108, wherein step (f) further comprises the step of reselecting a frame to be outputted until the frame of the second series has been decoded and is ready to be outputted.

110. (Previously presented) The method for decoding the digital motion picture according to claim 109, wherein the frame to be reselected corresponds to the frame outputted upon receiving the interrupt signal.

111. (Previously presented) The method for decoding the digital motion picture according to claim 98, further comprising the steps of:

- (i) decoding the second series frames in a third order; and
- (ii) outputting the second series of frames in a fourth order different from the third order.

112. (Previously presented) The method for decoding the digital motion picture according to claim 98, wherein the series of coded frames includes predictive coded data.

113. (Previously presented) The method for decoding the digital motion picture according to claim 98, further comprising the steps of determining timing of a frame to be outputted based on time information and output order for a frame previously outputted and output order for the frame to be outputted.

114. (Previously presented) The method for decoding the digital motion picture according to claim 113, wherein the output order for the frame previously outputted and output order for the frame to be outputted each correspond a display order for the respective frame.

115. (Previously presented) The method for decoding the digital motion picture according to claim 98, further comprising the steps of:

- (i) extracting output order and time information; and

(ii) outputting the frames according to the extracted output order and time information.

116. (Previously presented) The method for decoding the digital motion picture according to claim 115, further comprising the steps of:

- (iii) obtaining reference picture data; and
- (iv) decoding the frames using the reference picture data.

117. (Previously presented) The method for decoding the digital motion picture according to claim 108, further comprising the steps of:

- (iii) outputting the decoded frames; and
- (iv) storing the decoded in predetermined locations of a memory according to an address signal.

118. (Previously presented) The method for decoding the digital motion picture according to claim 98, wherein the series is coded by an MPEG coding scheme.

119. (Previously presented) The method for decoding the digital motion picture according to claim 129, wherein the signal interrupting step (c) corresponds to a manually inputted signal received from an external device.

120. (Previously presented) The digital motion picture decoding method of claim 18, wherein said MPEG coding method is MPEG 2 coding method.

121. (Previously presented) The digital motion picture outputting method of claim 27, wherein said MPEG coding method is MPEG 2 coding method.

122. (Previously presented) The digital motion picture decoding apparatus of claim 36, wherein said MPEG coding method is MPEG 2 coding method.

123. (Previously presented) The digital motion picture outputting apparatus of claim 45, wherein said MPEG coding method is MPEG 2 coding method.

124. (Previously presented) The digital motion picture decoding method of claim 54, wherein said MPEG coding method is MPEG 2 coding method.

125. (Previously presented) The digital motion picture outputting method of claim 63, wherein said MPEG coding method is MPEG 2 coding method.

126. (Previously presented) The digital motion picture decoding apparatus of claim 72, wherein said MPEG coding method is MPEG 2 coding method.

127. (Previously presented) The digital motion picture outputting apparatus of claim 81, wherein said MPEG coding method is MPEG 2 coding method.

128. (Previously presented) The method for decoding the digital motion picture according to claim 96, wherein said MPEG coding scheme is MPEG 2 coding scheme.

129. (Previously presented) The method for decoding the digital motion picture according to claim 118, wherein said MPEG coding scheme is MPEG 2 coding scheme.

130. (New) A digital motion picture decoding method comprising the steps of:
decoding a coded data stream as a reproduction picture;
receiving a manually inputted signal which causes only one discontinuity in time sequence of a coded data stream to be decoded;
rendering decoded data, including decoded data which has not been displayed, corresponding to coded data read prior to the occurrence of the discontinuity as null data; and
continuing to display a frame from data read prior to the occurrence of the discontinuity until a frame from coded data read after the discontinuity lapses is decoded and ready to be displayed.

131. (New) A digital motion picture decoding method comprising the steps of:
decoding a coded data stream as a reproduction picture;
receiving a manually inputted signal which causes only one discontinuity in time sequence of a coded data stream to be decoded;
rendering decoded data, including decoded data which has not been displayed, corresponding to coded data read prior to the occurrence of the discontinuity as null data; and

continuing to display a frame displayed upon receipt of the manually inputted signal until a frame from coded data read after the discontinuity lapses is decoded and ready to be displayed.

132. (New) A digital motion picture decoding method as defined in Claim 130, wherein said step of rendering decoded data as null data is for making coded data obtained after the occurrence of the discontinuity be able to be decoded.

133. (New) A digital motion picture decoding method as defined in Claim 131 wherein said step of rendering decoded data as null data is for making coded data obtained after the occurrence of the discontinuity be able to be decoded.